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09/657,068	09/07/2000	Kenneth M. Buckland	062891.0362	1585

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EXAMINER	
WILSON, ROBERT W	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/657,068	Applicant(s) BUCKLAND, KENNETH M.	
	Examiner Robert W Wilson	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 September 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 September 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2 & 3*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

DETAILED ACTION

1.0 The application of Kenneth M. Buckland entitled "Method and System for Processing Traffic in an Access Network" filed on 9/7/2000 without foreign priority was examined. Claims 1-40 are pending.

2.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.0 **Claims 1-40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et. al. (U.S. Patent No.; 6,345,051 B1).

Referring to **Claim 1**, Gupta et. al. (U.S. Patent No.; 6,345,051 B1) teaches: A method for processing traffic in an access network (Fig 1) comprising:

Receiving a plurality of ingress traffic streams, each ingress traffic streams including a plurality of packets having a destination address (Access Node 100 receives a plurality of IP traffic which has be converted into ATM from each of the PCs within the User Nodes having a destination address for the Internet Backbone per Fig 1 and col. 1 lines 11-col. 2 line 11 or col. 3 line 25-col 4 line 46)

Aggregating the ingress traffic streams into a combined traffic stream without regard to the destination address (Access Node 100 per Fig 1 aggregates the traffic from User Nodes and utilizes PVCs for ATM traffic without regard for IP destination addresses per Fig 1 and col. 1 lines 11-col. 2 line 11 or col. 3 line 25-col 4 line 46)

Transmitting the combined traffic stream to a backbone network for routing based on the destination addresses (The router receives the ATM cells which have been routed via PVCs converts the traffic from ATM to IP and then routes the IP traffic over the Internet Backbone based upon the inherent IP destination address in an IP packet per Fig 1 and col. 1 lines 11-col. 2 line 11 or col. 3 line 25-col 4 line 46)

Gupta does not expressly call for: without regard to the destination address but teaches PVCs per col. 1 lines 30-46.

It would have been obvious to one of ordinary skill in the art at the time of the invention to route the ATM via PVCs because SVC are not like to happen or be developed in the short run per Col. 1 lines 29-46 where the IP packets are subsequently routed over the IP Backbone Network via the Router per Fig 1.

In Addition Gupta et. al. (U.S. Patent No.; 6,345,051 B1) teaches:

Regarding **Claim 2**, wherein the packets are Internet Protocol (IP) packets and each include an IP address (DHCP Server provides IP Source address for PCs per Fig 1. The IP packets inherently have an IP destination in order to enable them to go the Internet Backbone per Fig 1)

Regarding **Claim 3**, further comprising: receiving each of the ingress traffic streams from the customer premise equipment (CPE) (Access Node per Fig 1); and transmitting the combined traffic stream to a backbone traffic in the backbone network (Access Node Transmits the traffic to Service Provider Node which contains a Router which is connected to the Internet Backbone per Fig 1)

Regarding **Claim 4**, further comprising: validating IP packets in the ingress traffic stream (ATM inherently checks for inherent trailer on IP packet or validating IP packets in the ingress traffic stream)

Regarding **Claim 5**, further comprising: routing IP packets of the ingress traffic streams to a network interface port of an access device (PVCs are utilized in ATM network to route IP packets to NIC 204 which is a network interface port per Fig 1)

Regarding **Claim 6**, further comprising receiving the ingress traffic streams at a plurality of customer premise equipment (CPE) ports (Access Node per Fig 1); segmenting at the CPE ports the IP packets in the ingress traffic streams into asynchronous transport mode (ATM) adaption layer (AAL) cells (210 per Fig 1)

Switching the AAL cells to the network interface port (ATM Network per Fig 1 or switching utilizing PVCs per col. 1 lines 29-46);

Reassembling the IP packets from the AAL cells at the network interface port (210 per Fig 1);

Aggregating the IP packets into the combined traffic stream (Access Node per Fig 1)

Regarding **Claim 7**, segmenting the IP packets at each CPE port into sets of AAL scells having a fixed ATM address associated with the CPE port (210 per Fig 1 wherein PVC are utilized or fixed address per col. 1 lines 31-46)

Buffering the AAL cells at the network interface port based on their ATM addresses (212 per Fig 1 performs buffering)

Reassembling the IP packets from completed sets of AAL cells (106 per Fig 1)

Regarding **Claim 8**, wherein the ATM address comprises a virtual private interface/virtual connection interface (VPI/VCI) address (VPI/VCI are inherently utilized in ATM)

Regarding **Claim 9**, wherein the IP packets are segmented into ATM adaption layer five (AAL-5) cells (col. 4 lines 29-30)

Regarding **Claim 10**, receiving an egress traffic stream from the backbone network (Service Node per Fig 1), the egress traffic stream having a plurality of IP packets each having an IP address (Service Provider Node has a Router which receives egress traffic stream of packets from the Internet Backbone which have destination addresses for the PCs per Fig 1)

Determining the customer premise equipment (CPE) port for each IP packet based on its IP address (The Router determines the PVC to send the IP packet to the appropriate NIC port per Fig 1)

Routing the IP packets to their respective CPE ports (The Router determines the PVC in which to route the packet to per Fig 1or per col. 1 lines 31-46)

Transmitting the IP packets from the CPE ports to their destination CPEs (210 per Fig 1)

Regarding **Claim 11**, further comprising determining the CPE ports for the IP packets using a static routing table (PVCs per col. 1 lines 31-46 which inherently have a static routing table)

Regarding **Claim 12**, further comprising: determining an asynchronous transport mode (ATM) address for each IP packet based on its IP address (Inherently performed by 210 per Fig 1 in order while performing AAL conversion)

Switching the AAL cells to their respective CPE ports based on the ATM addresses (PVCs utilized in the ATM network per Fig 1)

Reassembling the IP packets from the AAL cells at each CPE port for delivery (210 per Fig 1)

Regarding **Claim 13**, buffering the AAL cells at each CE port based on their ATM address (212 or processor which inherently has a buffer per Fig 1)

Reassembling the IP packets from complete sets of AAL cells (210 per Fig 1)

Regarding **Claim 14**, wherein the ATM address comprises a virtual private interface/virtual connection interface (VPI/VCI) address (VPI/VCI addressing inherent to ATM)

Regarding **Claim 15**, wherein the IP packets are segmented into ATM adaption layer five (AAL-5) cells (210 per Fig 1 and col. 4 line 30)

Referring to **Claim 16**, Gupta et. al. (U.S. Patent No.; 6,345,051 B1) teaches: A system for processing traffic in an access network (Fig 1) comprising:

Means for aggregating a plurality of ingress traffic streams from customer premise equipment (CPE) into a combined traffic stream for transmission of a backbone network (Access Node per Fig 1 and col. 1 lines 11-col. 2 line 11 or col. 3 line 25-col 4 line 46) and

Means for routing egress traffic received from the backbone network to CPE using a static routing (Access Node, ATM Network and Service Provider Node provide means to route ATM traffic via PVCs or static routes to the PCs within the USER Nodes or CPE per Fig 1)

Gupta does not expressly call for: static routes but teaches PVC per col. 1 lines 31-46.

It would have been obvious to one of ordinary skill in the art at the time of the invention that a PVC performs the same function as a static route because it is a nailed up route or static route.

In Addition Gupta et. al. (U.S. Patent No.; 6,345,051 B1) teaches:

Regarding **Claim 17**, wherein the ingress and egress traffic streams comprise the plurality of Internet Protocol (IP) packets (Fig 1)

Regarding **Claim 18**, means for segmenting incoming IP packets into asynchronous transport mode (ATM) adaption layer (AAL) cells (Router per Fig 1. It would have been obvious to one of ordinary skill in the art at the time of the invention that the router performs the function of segmenting incoming IP packets into ATM in order for the invention to work with 210 per Fig 1)

Means for switching the AAL cells within the access network (ATM network and PVCs per Fig 1)
Means for reassembling the AAL cells into outgoing IP packets (Router per Fig 1. It would have been obvious to one of ordinary skill in the art at the time of the invention that the router performs this function in order for the invention to work with 210 per Fig 1)

Regarding **Claim 19**, wherein the IP packets are segmented into ATM adaption layer five (AAL-5) cells (col. 4 ine 29)

Referring to **Claim 20**, Gupta et. al. (U.S. Patent No.; 6,345,051 B1) teaches: A method for routing traffic in an access network (Fig 1), comprising:

Receiving ingress Internet Protocol (IP) packets from customer premise equipment (210 within the User Node, Access Node, ATM Network, and Service Provider Node receive IP packets from the PC or customer premise equipment per Fig 1 and col. 1 lines 11-col. 2 line 11 or col. 3 line 25-col 4 line 46).

Receiving egress IP packets from a backbone network for deliver to CPEs (Service Provider Node per Fig 1)

Segmenting the ingress IP packets at the CPE interface of an access network into asynchronous transport mode (ATM) adaptation layer (AAL) cells (210 per Fig 1)

Segmenting the egress IP packets at the network interface into AAL cells (Service Provider Node per Fig 1)

Switching the AAL cells across the access network (USER NODE, Access Node, ATM Network and Service Provider Node switch the AAL cells across the access network per Fig 1 or per col. 1 lines 31-46 utilizing PVCs per col. 1 lines 31-46)

Gupta does not expressly call for: Segmenting the egress IP packets at the network interface into AAL cells but teaches Service Provider Node and 210 which converts IP into AAL per Fig 1

It would have been obvious to one of ordinary skill in the art at the time of the invention that the Service Provider Node would have to performs segmenting the IP traffic into AAL cells in order for the invention to work with 210 per Fig 1.

In Addition Gupta et. al. (U.S. Patent No.; 6,345,051 B1) teaches:

Regarding **Claim 21**, wherein the IP packets are segmented into ATM adaption layer five (AAL-5) cells (col. 4 line 29)

Regarding **Claim 22**, further comprising reassembling the AAL cells into IP packets at a periphery of the access network (210 per Fig 1)

Regarding **Claim 23**, further comprising delineating the IP packets (Checking for trailer on IP packet or delineating IP packets which are inherently a part of AAL 5 conversion)

Regarding **Claim 24**, further comprising validating the IP packets (Checking for trailer on IP packet or validating IP packets which are inherently a part of AAL 5 conversion)

Regarding **Claim 25**, further comprising dropping defective IP packets (TCP which is a part of IP. Inherently drops defective packets as a part of its windowing function)

Referring to **Claim 26**, Gupta et. al. (U.S. Patent No.; 6,345,051 B1) teaches; A system for processing traffic in an access network (Fig 1) comprising:

Logic stored in a computer processable medium (User Node, Access Node, ATM Network, and Service Provider Node per Fig 1.)

The logic operable to receiving a plurality of ingress traffic streams from each ingress traffic streams, each ingress traffic stream including a plurality of Internet Protocol (IP) packets having an IP address (User Node, Access Node, ATM Network, and Service Provider Node per Fig 1), aggregate the ingress traffic streams into a combined traffic stream without regard to the IP address and transmit the combined traffic streams to the backbone network for routing based on the IP addresses (The User Node, Access Node, & ATM Network route the ATM traffic utilizing PVC per col. 1 lines 31-46 to the Service Provider Node which has a router which routes the IP traffic over the Internet Backbone per Fig 1.)

Gupta does not expressly call for: logic stored in a computer processable medium but teaches; User Node, Access Node, ATM Network, and Service Provider Node per Fig 1. It is within the level of one skilled in the art to implement the User Node, Access Node, ATM Network, and Service Provider Node in software. It would have been obvious to one of ordinary skill in the art at the time of the invention to store the software on a computer processable medium so that the tasks of the User Node, Access Node, ATM Network, and Service Provider Node could be performed by processors.

In Addition Gupta et. al. (U.S. Patent No.; 6,345,051 B1) teaches:

Regarding **Claim 27**, the logic further operable to receive each of the ingress traffic streams from customer premise equipment (CPE) (Access Node per Fig 1. It is within the level of one skilled in the art to implement the Access Node in logic.)

Regarding **Claim 28**, the logic further operable to transmit the combined traffic stream to a backbone router in the backbone network (Access Node Transmits the traffic to Service Provider Node which contains a Router which is connected to the Internet Backbone per Fig 1. It is within the level of one skilled in the art to implement the Router in logic.)

Regarding **Claim 29**, the logic further operable to validate IP packets in the ingress traffic stream and to aggregate all valid packets into the combined traffic stream (210 per Fig 1 validates the IP packets by checking for the inherent trailer before segmenting the packets into AAL. It is within the level of one skilled in the art to implement 200& 210 per Fig 1 in logic

Regarding **Claim 30**, the logic further operable to route IP packets in the ingress traffic streams to a network interface port of an access device and to aggregate the IP packets into the combined traffic streams at the network interface port (Fig 1. It is within the level of one skilled in the art to implement 200, 100, & 400 per Fig 1 in logic.)

Regarding **Claim 31**, the logic further operable to receive the ingress traffic streams at a plurality of customer premise equipment (CPE) ports (Access node per Fig 1)

Segment at the CPE ports the IP packets in the ingress traffic streams into asynchronous transport mode (ATM) adaption layer (AAL) cells (210 per Fig 1), switch the AAL cells ito the network interface port (210 per Fig 1), reassemble the IP packets from the AAL cells at the network interface port and aggregate the IP packets into the combined traffic streams (Access Node per Fig 1. It is within the level of one skilled in the art to implement 200 &210 per Fig 1 in logic.)

Regarding **Claim 32**, wherein the IP packets are segmented into ATM adaption layer five (AAL-5) cells (col. 4 line 29)

Regarding **Claim 33**, the logic further operable to segment IP packets at each CPE port into sets of AAL cells having a fixed ATM address associated with CPE port (210 per Fig 1 wherein PVC are utilized or fixed address per col. 1 lines 31-46)

Buffer the AAL cells at the network interface port based on their ATM addresses (212 per Fig 1 performs buffering),

And reassembling the IP packets from completed sets of AAL cells (106 per Fig 1. It is within the level of one skilled in the art to implement 210, 212, & 106 per Fig 1 in logic.)

Regarding **Claim 34**, wherein the ATM address comprises a virtual private interface/virtual connection interface (VPI/VCI) address (VPI/VCI are inherently utilized in ATM)

Regarding **Claim 35**, the logic further operable to receive an egress traffic stream from the backbone network (Service Provider Node per Fig 1), the egress traffic stream including a plurality of IP packets each having an IP address (Traffic from IP Backbone per Fig 1), determining a customer premise equipment (CPE) port for each IP packet based on its IP address (The router determines the PVC that is associated with the PC or CPE per Fig 1), route the IP packets to their respective CPE ports and transmit the IP packets from the COE ports to their destination CPE (PVCs per col. 1 lines 31-46. It is within the level of one skilled in the art to implement the PVCs in logic)

Regarding **Claim 36**, the logic further operqable to detemine the CPE ports for the IP packets using a static routing table (PVCs per col. 1 lines 31-46 which inherently has a static routing table. It is within the level of one skilled in the art to implement the method of PVCs in logic)

Regarding **Claim 37**, the logic further operable to determine an asynchronous transport mode (ATM) address for each packet based on its IP address (210 per Fig 1. Inherently performed when converting AAL to IP), segmenting each IP packet into a set of ATM adaption layer AAL cells having the ATM address for the IP packet (210 per Fig 1), switch the AAL cells to their

respective CPE ports based on the ATM address and reassemble the IP packets from the AAL cells at each CPE port for delivery based on their IP address (210 per Fig 1. It is within the level of one skilled in the art to implement 210 per Fig 1 in logic)

Regarding Claim 38, logic further operable to buffer the AAL cells at each COE port based on their ATM addresses and reassemble the IP; packets from complete sets of AAL cells (Processor or 214 per Fig 1 which inherently has a buffer)

Regarding **Claim 39**, wherein the ATM address comprises a virtual private interface/virtual connection interface (VPI/VCI) address (VPI/VCI are inherently utilized in ATM)

Regarding **Claim 40**, wherein the IP packets are segmented into ATM adaption layer five (AAL-5) cells (col. 4 lines 29-30)

Conclusion

4.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 703/305-4102. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Robert W. Wilson
Examiner
Art Unit 2661

RWW
April 27, 2004

DOUGLAS OLMS
PRIMARY EXAMINER